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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/532,976	04/28/2005	Tadashi Hiramoto	Q87718	9070
65565	7590	12/04/2007	EXAMINER	
SUGHRUE-265550			FRAZIER, BARBARA S	
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WASHINGTON, DC 20037-3213			PAPER NUMBER	
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

### Office Action Summary

**Application No.**

10/532,976

**Applicant(s)**

HIRAMOTO ET AL.

**Examiner**

Barbara Frazier

**Art Unit**

4173

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 15 November 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) 7 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-6, 8 and 9 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-8508)  
Paper No(s)/Mail Date 2 sheets.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Election/Restrictions***

1. Applicant's election without traverse of species A in the reply filed on 11/15/07 is acknowledged.
2. Claims 7 and 10 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected species, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 11/15/07.
3. Claims 1-6, 8, and 9 are examined.

### ***Priority***

4. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

### ***Information Disclosure Statement***

5. The information disclosure statements filed 4/28/05 and 9/6/06 fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the content of the information, of each patent listed that is not in the English language. It has been placed in the application file, but the information referred to therein has not been considered.

***Specification***

6. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

***Claim Rejections - 35 USC § 102***

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 6, 8, and 9 are rejected under 35 U.S.C. 102(b) as being anticipated by Rosmarin et al., US Patent 2,875,769.

The claimed invention is drawn to a deodorant composition comprising, as an active component, a colored compound obtainable by reacting a polyphenol in a solvent showing alkalinity in the coexistence of oxygen molecules at a reaction pH value of 6.5 or more (see claim 1). The composition may also have an amino acid, such as an alpha-amino acid, further added to the reaction system (claims 8 and 9).

Rosmarin et al. disclose a keratinaceous fiber dye derived from reaction, under alkaline conditions, between hydroquinone and an alpha-amino acid which is either dihydroxyphenylalanine or dihydroxyphenylglycine (col. 1, lines 15-20). The product formed is a reactant-dye (col.1, line15), and therefore would inherently be colored. The reaction takes place in an aqueous non-acid alkaline medium (col. 2, line 20) at a pH value of 8 to about 11,

Art Unit: 4173

most effectively from about pH 9 to about pH 10 (col. 2, lines 27-29). The reaction takes place advantageously always with stirring (col. 5, lines 10-11) and then in the presence of an oxidizing agent (col. 5, lines 17-19), and therefore is in the coexistence of oxygen molecules. Therefore, the composition of Rosmarin et al. anticipates the composition of the claimed invention.

With respect to the preamble of claim 1, identifying the composition as a “deodorant composition”, it is noted that the preamble merely states the intended use of the invention, rather than any distinct definition of any of the claimed invention’s limitations, and therefore is not considered a limitation giving any weight to the claim. MPEP 2111.02.

### *Claim Rejections - 35 USC § 103*

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

11. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

12. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rosmarin et al., US Patent 2,875,769.

The claimed invention and the invention of Rosmarin et al. are recited above (see paragraph 6).

In claim 2, Rosmarin et al. differ from the claimed invention because they do not specifically state that the oxygen molecule supplying amount during the reaction is 1 mg/L or more. However, the reaction takes place advantageously with stirring (col. 5, lines 10-11), and one skilled in the art would recognize that, under such conditions, the concentration of oxygen would fall within the range specified in claim 2.

In claim 3, Rosmarin et al. differ from the claimed invention because they do not specifically state that the reaction temperature is in the range of 0 to 60 degrees C. However, since no temperature is specified, one skilled in the art would recognize that the reaction takes place at ambient temperature, or 25 degrees C, which is encompassed by Applicant's temperature range.

In claim 4, Rosmarin et al. differ from the claimed invention because they do not specifically state that a metal ion is further added to the reaction system. However, the reaction may take place in the presence of an alkali metal hydroxide (col. 5, lines 41-48), thus supplying an alkali metal ion to the reaction system.

In claim 5, Rosmarin et al. differ from the claimed invention because they do not specifically exemplify an o-diphenol being used as the polyphenol instead of hydroquinone. However, Rosmarin et al. do teach that another polyhydric phenol may be present, such as catechol, an o-diphenol (col. 3, lines 23-29).

13. Claims 1-3, 5, and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Echigo et al., US Patent 6,190,891.

The claimed invention is drawn to a deodorant composition comprising, as an active component, a colored compound obtainable by reacting a polyphenol in a solvent showing alkalinity in the coexistence of oxygen molecules at a reaction pH value of 6.5 or more (see claim 1). Echigo et al. disclose a process for producing high-molecular weight phenolic compounds by reacting a phenolic compound in an alkaline pH reaction medium (claim 1, column 18). The compositions produced may be deodorant compositions (col. 3, lines 64 – col. 4, line 3). The pH value of the alkaline pH region is preferably not lower than pH 8 (col. 3, lines 18-19). Echigo et al. differ from the claimed invention because they do not specifically state that the composition is a colored compound, or that the composition is produced in the coexistence of oxygen molecules. However, Echigo et al. teach that, as the compositions are formed, the color tone of the reaction mixture turns denser (see, for example, Example 4, col. 12, lines 29-30).

Therefore, one skilled in the art would recognize that the compound formed would be a colored compound. Furthermore, the compositions are produced with shaking (for example, Example 4, col. 12, line 25), without a vacuum, and therefore the reaction would necessarily occur in the coexistence of oxygen molecules. Therefore, it would have been obvious at the time the invention was made to form deodorant compositions according to Echigo et al. and arrive at the claimed invention, with a reasonable expectation of success.

Regarding the amount of oxygen molecules supplied (claim 2), one skilled in the art would recognize that the action of shaking the reaction mixture would cause the concentration of oxygen molecules supplied to fall within the range specified in claim 2.

Regarding the reaction temperature (claim 3), Echigo et al. teach that the temperature may preferably be 0-100 degrees C (col. 7, lines 21-22). This range overlaps the temperature range of the claimed invention, and one skilled in the art would be able to optimize the temperature used as a matter of routine experimentation.

Regarding the presence of an o-diphenol or hydroquinone (claims 5 and 6), Echigo et al. teach that the phenolic compound used may be pyrocatechol (an o-diphenol) or hydroquinone (col. 8, lines 20-23).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Barbara Frazier whose telephone number is (571)270-3496. The examiner can normally be reached on Monday-Thursday 8am-4pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin Marschel can be reached on (571)272-0718, or Cecilia Tsang can be reached



on (571)272-0562. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BSF

/Cecilia Tsang/  
Supervisory Patent Examiner, Art Unit 4173